

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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BEDGEAR, LLC,

Plaintiffs,

MEMORANDUM AND ORDER

-against-

2:15-cv-6759 (KAM)

FREDMAN BROS. FURNITURE COMPANY,
INC.,

Defendant.

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MATSUMOTO, United States District Judge:

Plaintiff Bedgear LLC ("Bedgear") commenced this action against Fredman Bros. Furniture Company, Inc., d/b/a Glideaway Sleep Products ("Glideaway"), alleging that Glideaway wrongfully infringed upon Bedgear's patents, specifically United States Patents Nos. 8,646,134 (the "'134 Patent"), 8,887,332 (the "'332 Patent"), 9,015,883 (the "'883 Patent"), and 9,155,408 (the "'408 Patent"), diluted Bedgear's trademarks, and misappropriated its trade secrets.

Before the court are the parties' submissions for claim construction of thirteen terms in the '134, '332, and '883 Patents (the "Gusset Patents") and two terms recited in the '408 Patent.

Background

Plaintiff Bedgear, is a Delaware limited liability company with its principal place of business in Farmingdale, NY.

(Bedgear Third Amended Complaint ("Third Amended Complaint"), ECF No. 68, ¶ 1.) Bedgear uses its technology to develop bedding products and accessories, including pillows. (*Id.* ¶ 2; Bedgear Second Amended Complaint ("Second Amended Complaint"), ECF No. 61, ¶ 1.) Defendant Glideaway manufactures and distributes bedding products, including pillows. The patents at issue—the "Gusset Patents"—are three patents within the same patent family, directed to "novel designs and structures for pillows." (Bedgear Opening Claim Construction Brief ("Bedgear Op. Br."), ECF No. 74, at 8.)¹ Notably, the pillows incorporate a gusset that joins the first and second panels of the pillow cover,² which gusset is of "open cell construction," such that warm air from the person resting or sleeping escapes through the gusset, providing a cooling effect. At issue is the construction of terms relating to the gusset, including "gusset," the "open cell construction" of the gusset, and "said open cell construction being formed by strands defining a mesh configuration."

Bedgear commenced the instant action on November 24, 2015, alleging patent infringement in relation to its Gusset Patents. The claims of the '408 Patent are directed to pillow

¹ Page citations referenced herein refer to the numbers assigned by the Electronic Court Filing System ("ECF") except where citations to paragraphs within a document are used or where otherwise specifically noted.

² The "first" and "second" panels of fabric on a pillow are the top and bottom of a pillow lying flat on a surface.

covers and bedding systems. The claimed pillow covers include, *inter alia*, an aperture in one of the panels, which is covered in some embodiments by a filter. Bedgear alleges that the claimed pillow cover improves on existing pillowcases by preventing dirt and oils from being transmitted to the pillow itself, and provides additional cooling and airflow by enabling air to escape through the aperture in the pillow cover.

(Bedgear Op. Br., Ex. D. '408 Patent, ECF No. 74-5, at 1:30.)

The claimed pillow cover is not necessarily intended to replace conventional pillowcases. The patent specifically indicates that the claimed pillow cover may be used by itself or put into a conventional pillowcase. (See *Id.* at p. 4 Fig. 3.)

The parties submitted a Joint Disputed Claim Terms Chart on June 21, 2017 in accordance with Rule 11 of this District's Local Patent Rules. (See ECF No. 72 ("Joint Disputed Claim Terms Chart"); Docket Order dated June 20, 2017.) In it, the parties represented that they reached a resolution on proposed construction of four terms, and dispute the proper construction of thirteen terms. For the terms where the parties agree on a proposed construction, the parties request that the court adopt the agreed-upon proposals, and the court does so to the extent, and for the reasons stated below. A claim construction, or *Markman*, hearing was held before this court on January 18, 2018, at which the parties presented oral arguments

to further explain their respective constructions of the claim terms in dispute. (See generally Transcript of Markman Hearing, ECF No. 89.)

I. *Inter Partes* Review

Glideaway had sought *inter partes* review ("IPR") of the four patents-in-suit from the Patent Trial and Appeals Board ("PTAB"). (See Joint Letter Regarding Status of IPRs, ECF No. 93.) On June 12, 2018, PTAB issued Final Written Decisions in the IPRs regarding the '134 Patent, the '332 Patent and the '883 Patent. In the Final Written Decisions for the IPRs involving the '134 and '883 Patents, PTAB found that all of the challenged claims were unpatentable based on the prior art raised by Glideaway. See *Fredman Bros. Furniture Co., Inc.*, IPR2017-00352, 2018 WL 2997360, at *1 (June 12, 2018); *Fredman Bros. Furniture Co., Inc.*, IPR2017-00351, 2018 WL 2997320, at *1 (June 12, 2018). Those claims included the claims asserted by Bedgear in this case. In its Final Written Decision regarding the '332 Patent, PTAB found that all but Claim 23 of the challenged claims were unpatentable based on prior art. *Fredman Bros. Furniture Co., Inc.*, IPR2017-00350, 2018 WL 2997319, at *1 (June 12, 2018). Claim 23 is asserted by Bedgear in this lawsuit and Bedgear seeks construction of the claim.

On June 14, 2018, Bedgear filed Notices of Appeal to the U.S. Court of Appeals for the Federal Circuit (the "Federal

Circuit") from the PTAB's decisions in each of the three IPRs. On July 13, 2018, PTAB issued its Final Written Decision in the IPR involving Patent No. '408, finding that Claim 12 is unpatentable based on prior art. *Fredman Bros. Furniture Co., Inc.*, IPR2017-00524, 2018 WL 3427772, at *1 (July 13, 2018). Claim 12 is the only claim in Patent No. '408 asserted by Bedgear in this case. On July 18, 2018, Bedgear filed a Notice of Appeal to the Federal Circuit from the PTAB's decision regarding Claim 12 of Patent No '408.

Based on PTAB's determinations regarding the patents at issue in this case, the court finds that only Claim 23 of the '332 Patent remains at issue in the instant case with regard to the parties' infringement contentions. However, assuming arguendo that the Federal Circuit will reverse the PTAB's Final Determinations, this court construes the claims raised by Bedgear in the instant litigation.

Legal Standards

I. Claim Construction

To protect an inventor's rights, patents "must describe the exact scope of an invention." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996). "It is well established that determining infringement is a two-step process." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115-16 (Fed. Cir. 2004). The court

first construes a patent's claim limitations to define the meaning and scope of the invention, and second, compares the accused device to the construed claims.

“‘[T]he construction of a patent, including terms of art within its claim,’ is not for a jury but ‘exclusively’ for ‘the court’ to determine.” *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 835 (2015)³ (citing *Markman*, 517 U.S. at 372). In deciding matters of claim construction, district courts have “wide latitude” regarding the procedure by which to reach a final determination, “[a]s long as the trial court construes the claims to the extent necessary to determine whether the accused device infringes.” See *Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir. 2001).

In addition, the court need only construe claims that are “in controversy” and only “to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999); see also

³ In *Teva*, the Supreme Court held that the Federal Circuit must apply a clear error standard when reviewing a district court’s resolution of subsidiary factual matters made in the course of its construction of a patent claim. When a “district court reviews only evidence intrinsic to the patent (the patent claims and specifications, along with the patent’s prosecution history), the judge’s determination will amount solely to a determination of law, and the Court of Appeals will review that construction *de novo*.” *Teva*, 135 S. Ct. at 841. “In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Id.*

Ballard, 268 F.3d at 1358 (“If the district court considers one issue to be dispositive, the court may cut to the heart of the matter and need not exhaustively discuss all the other issues presented by the parties.”). Further, the court is not required to construe every limitation present in a patent’s asserted claims, but rather, the focus is on resolution of disputed meanings and scope for use in the determination of infringement. See *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).

II. Sources for Construing Claims

Courts must construe patent claims “objectively,” *Vivid Techs.*, 200 F.3d at 803, by seeking to accord a claim the meaning it would have to a “person of ordinary skill in the art [‘POSITA’] at the time of the invention.” *Innova/Pure Water, Inc.*, 381 F.3d at 1116. In doing so, a court considers three primary sources within the intrinsic evidence of record: (i) the language of the claims, (ii) the specification, and (iii) the prosecution history. *Secure Web Conference Corp. v. Microsoft Corp.*, No. 13-CV-2642, 2014 WL 4954644, at *1 (E.D.N.Y. Oct. 2, 2014) (citing *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

A. Claim Language

First, the court looks to the words of the claims themselves, both asserted and non-asserted, to define the scope

of the patented invention. See *HowLink Global LLC v. Network Commc'ns Int'l. Corp.*, 561 F. App'x 898, 905 (Fed. Cir. 2014) (quoting *Vitronics*, 90 F.3d at 1582). In making such a determination, the words of the claim are the "controlling focus." *Secure Web*, 2014 WL 4954644, at * 2 (citing *Digital Biometrics, Inc., v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998)). In general, the language of a claim is given its ordinary and customary meaning to a person skilled in the art unless a distinct definition is employed in the specification or prosecution history. See *Digital Biometrics*, 149 F.3d at 1344 (citing *York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996) ("Without an express intent to impart a novel meaning to claim terms, an inventor's claim terms take on their ordinary meaning.")); accord *Innova/Pure Water*, 381 F.3d at 1116; *InTouch Techs, Inc. v. VGO Commc'ns Inc.*, 751 F.3d 1327, 1339 (Fed. Cir. 2014); *Interactive Gift Exp., Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1332 (Fed. Cir. 2001).

B. Specification

Next, the court looks at a patent's specification, as "[c]laims must be read in view of the specification, of which they are a part." *Markman*, 52 F.3d at 979. The specification may assist in the court's determination of whether the inventor intentionally used any terms in the claims in a manner

inconsistent with their ordinary meaning; however, this intention must be clear. See *Vitronics*, 90 F.3d at 1582 (“[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.”). If a patentee selects a meaning distinct from that which the claim terms would otherwise have to a person of ordinary skill in the art, the different meaning must be set out in the specification in a manner sufficient to give one of ordinary skill notice of the change from the usual meaning. *Innova/Pure Water*, 381 F.3d at 1117. However, it is improper for courts to read limitations from the specification into a claim. *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1368 (Fed. Cir. 2005) (citing *Phillips*, 415 F.3d at 1312).

C. Prosecution History

Third, the court may consider the prosecution history of the patent, if it is in evidence. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005). A patent’s prosecution history contains a complete record of all the proceedings before the United States Patent and Trademark Office (“USPTO”), including any express representations made by the applicant regarding the scope of the claims. Therefore, the prosecution history provides evidence of how the USPTO and the inventor

understood the patent, and the record before the USPTO can be of critical significance in determining the meaning of the claims. See *Phillips*, 415 F.3d at 1317 (“Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.”) (citations omitted); see also *Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995) (citations omitted) (“The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution. Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.”).

D. Extrinsic Evidence

Although it is well-settled that courts should look primarily to the intrinsic evidence of record in resolving a claim construction dispute, extrinsic evidence may be considered when ambiguity remains after consulting the intrinsic evidence. *Vitronics*, 90 F.3d at 1583. However, extrinsic evidence, is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Secure Web*, 2014 WL 4954644, at *2 (citing *Phillips*, 415 F.3d at 1317). Indeed, in permitting consideration of extrinsic evidence, “[t]he Federal Circuit has cautioned courts not to place too much reliance on extrinsic evidence and too little reliance on intrinsic sources.” *Id.* at *2 (citing *Phillips*, 415 F.3d at

1320). Extrinsic evidence has been defined to include evidence external to the patent and prosecution history, such as expert testimony, inventor testimony, dictionaries, and relevant treatises or articles. See *Id.* (citing *Phillips*, 415 F.3d at 1317).

Claim Terms at Issue

In their briefing, the parties agree on proposed construction of four terms, and dispute the proper construction of thirteen terms.⁴ For the four terms on which the parties agree on a proposed construction, they request that the court adopt the agreed-upon proposals.

I. Claim Terms Not in Dispute

A. Terms and Proposed Constructions

"compliant fill material" ('134 Patent Claims 1, 11, 16)	"a fill material that compresses when a force is applied and substantially regains its original shape when the force is removed"
"compliant material" ('332 Patent: Claim 9; '883 Patent, Claim 10)	"a material that compresses when a force is applied and substantially regains its original shape when the force is removed"
"perimetrically joined" ('408 Patent Claim 12)	"joined along its perimeter"

⁴ Glideaway initially requested that the court construe the term "wherein an opening extends through the inner surface of the first panel and an outer surface of the first panel, the opening having a size shape and arrangement" (see Joint Disputed Claim Terms Chart at 7), but has now agreed that no construction is necessary. (See Glideaway Opposing Brief, ECF No. 76 at 30 ("Glideaway no longer believes express construction of this term is necessary").) As such, the court will not construe the term.

"engages an inner surface of the first panel" ('408 Patent Claim 12)	"attaches to a surface of the first panel that is inside the pillow cover"
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B. Analysis

The court adopts the parties' proposed constructions for the terms "perimetrically joined" and "engages an inner surface of the first panel," which are consistent with the plain meaning of these terms and reflect their usage in the claims. However, the parties have provided no authority or source for construing "compliant material" and "compliant fill material" as "[fill] material that compresses when force is applied *and substantially regains its original shape when the force is removed*" (emphasis added). Although the parties' definition is partially consistent with extrinsic definitions of the word "compliant",⁵ there is no evidence in the record with regard to the part of the construction that requires the "compliant material" to "regain[] its shape when the force is removed." This term, however, is not in dispute and is not central to the disputed issues in this action, therefore, the court need not independently construe it at this time. *Vivid Techs., Inc.*, 200 F.3d at 803 (explaining that the court need only construe claims

⁵ *E.g.* Webster's Third New International Dictionary 465 (2002) (defining "compliant" as "ready . . . or likely to yield (as to pressure . . .)"; see also *id.* (defining "compliance" as "the quality or state of yielding to bending under stresses within the elastic limit" (third definition)).

that are in controversy, and “only to the extent necessary to resolve the controversy”).

II. Claim Terms in Dispute

Please see Joint Disputed Claim Terms Chart Pursuant to Local Patent Rule 11.

A. Gusset Patents

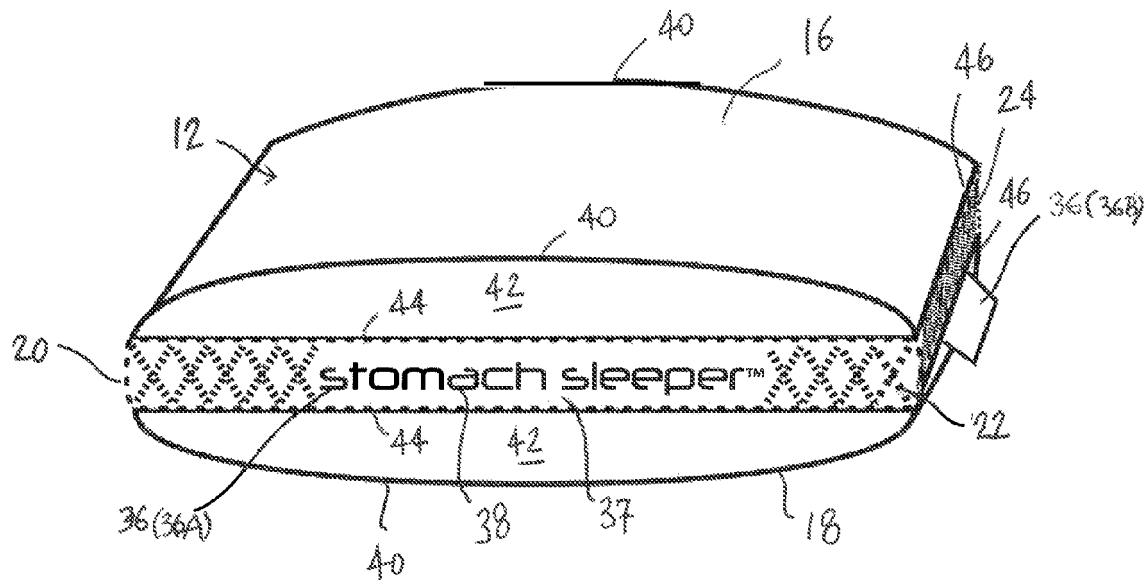
i. “Gusset”

The term “gusset” is included in all of the independent claims across the three Gusset Patents, and Bedgear’s expert has acknowledged that the claimed gusset is “instrumental in providing the advantages of the claimed invention.” (Bedgear Op. Br., Ex. F, Declaration of Radhakrishnaiah Parachuru in Support of Patent Owner’s Preliminary Response (“Parachuru Dec.”), ECF No. 74-8, ¶ 58.) Specifically, the claimed gusset enables the cooling function that Bedgear asserts is an improvement over other pillows. (*Id.*)

Bedgear’s proposed construction of “gusset” is “one or more portions of material that join the first and second panels.” Bedgear argues that this construction is supported by both the claim language and the specifications. (Bedgear Op. Br. at 16-17.) Glideaway submits that Bedgear’s proposed construction is impermissibly overbroad, such that a simple seam would satisfy Bedgear’s proposed construction of the term

"gusset." (Glideaway's Responsive Claim Construction Brief ("Glideaway Resp. Br."), ECF No. 76, at 9.) Glideaway's proposed construction, "a generally vertically-oriented portion of a pillow between the top and bottom panels of a pillow to provide for enlargement or expansion of the pillow," is based on prior patents referenced during the prosecution history of the Gusset Patents and its expert's declaration concerning the meaning of "gusset" to a person of ordinary skill in the art. (*Id.* at 12-16.) Bedgear counters that Glideaway's proposed construction impermissibly adds an orientation ("generally vertically-oriented") and purpose ("to provide for enlargement or expansion") that are unsupported by the intrinsic evidence.

Based on the claims and the specifications, the court construes the claimed term "gusset" as "piece or pieces of material between and separating the first and second panels, such that the first and second panels are each joined to the gussets, but not joined to each other." In other words, where a gusset is used, there is no seam or direct connection between the first (i.e., top) and second (i.e., bottom) panels of a pillow's fabric covering. Instead, the first panel is connected to the gusset, which gusset is separately attached to the second panel. In the diagram below, the material reading "stomach sleeper" is the gusset.



Bedgear's proposed construction of the term "gusset" - that a gusset is "one or more portions of material that join the first and second panels," poses two problems. First, as Glideaway points out, a "portion[] of material" that joins two panels could be a piece of fabric that is used to directly stitch the first and second panels of the pillow to each other, or a piece of fabric that lies over a seam and reinforces a connection between the two panels, neither of which is consistent with the remainder of the specification or claims. (Glideaway Resp. Br. at 9.) Second, a portion of the proposed construction is redundant to other language in the claims. For example, the '134 Patent recites "a gusset . . . joining[the] first and second panels . . .", a formulation recited elsewhere in the '134 Patent, the '332 Patent, and the '883 Patent. (See,

e.g., '134 Patent Claim 17; '332 Patent Claims 1, 31, 33, 34; '883 Patent Claims 1.) If a gusset is construed as "material that join[s] the first and second panels," this claim language is superfluous. "A claim construction that renders claim language superfluous is almost always incorrect." See *Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007).

Glideaway's proposed construction is also flawed because it adds an orientation ("a generally vertically-oriented portion of a pillow") and purpose ("to provide for enlargement or expansion") to the claimed gusset. These additional limitations are not supported in either the claims or in the specification. Here, the court declines to adopt Glideaway's proposed construction because it could limit the claim in ways not supported by the claims or the specifications.

First, there is no support in the patent for the proposition that the claimed gusset should be construed as being "generally vertically-oriented." ('134 Patent.) At best, this element of Glideaway's proposed construction can be taken to mean that the gusset is generally perpendicular to the plane of the top and bottom of the pillow, but even this more generic framing is not supported in the patent. There is nothing in the patents, however, that would preclude the gusset from being coplanar with one of the panels. To the extent illustrations of the gusset show it as "vertically oriented" and perpendicular to

a horizontal panel, "it is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004); accord *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1368 (Fed. Cir. 2005) (citation omitted).

Second, neither the specifications nor claims support a construction that the gussets' purpose is "to provide for enlargement or expansion." Glideaway submits expert testimony and intrinsic evidence of prior art cited during the prosecution history, suggesting that a person of ordinary skill in the art would understand a gusset to serve this function. (Glideaway Resp. Br. at 8-11; see also Decl. of Jennifer Frank Rhodes in Support of Glideaway Resp. Br., ("Rhodes Dec."), ECF No. 78, ¶¶ 47-49.) Nothing in the prior art or the extrinsic evidence shows that a person of ordinary skill would understand a gusset to *only* serve the function of expansion or enlargement, particularly in the context of the Gusset Patents. The claims and specifications of the Gusset Patents make clear that the function of the gusset is to provide cooling. ('134 Patent at 2:1-10, 4:20-25; '332 Patent 2:5-15; '883 Patent 2:1-17.) Furthermore, Glideaway's proposed construction would simply not make sense as applied to some embodiments explicitly

contemplated in the Gusset Patents. Specifically, where the Gusset Patents disclose embodiments that use a pillow made with solid foam (e.g. '134 Patent Claim 7); there would be no need for "expansion" of the pillow where such fill is used.⁶ This suggests that Glideaway's proposed construction is flawed. See *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1379 (Fed. Cir. 2014). "A construction that would exclude the preferred embodiment is rarely, if ever, correct and would require highly persuasive evidentiary support." *Id.* (internal quotation marks and citations omitted).

As both of the proposed constructions are flawed, the court will instead construe "gusset" to mean "a piece or pieces of material between and separating the first and second panels, such that the first and second panels are each joined to the gusset but are not joined to each other." This construction reflects the manner in which the term "gusset" is used in the claims.

ii. "Open Cell Construction" And Related Terms

The Gusset Patents each recite claims for a gusset formed of an "open cell construction." In the Summary of Invention for each of the three patents, "open cell

⁶ In contrast, certain prior art cited in the prosecution history and referenced by Glideaway as support for its proposed construction used a gusset to permit the stuffing of a pillow to "spread out," a feature not claimed or necessarily relevant to embodiments of the gusseted pillow claimed by Bedgear. (See Rhodes Dec., ¶ 53 (describing the "Fry" patent).)

construction" is defined as "a construction having overall porosity greater than the inherent porosity of the constituent materials or inherently having high porosity." ('134 Patent at 1; '332 Patent at 1; '883 Patent at 1.) The parties do not disagree that this is the inventor's definition, and that it should govern. See *Vitronics*, 90 F.3d at 1582 ("[A] patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.") As discussed further below, Glideaway argues that the inventor's definition results in the term "open cell construction" being indeterminate within the meaning of Title 35 U.S.C. 112 ¶ 2.

The term "open cell construction" is used in nine ways throughout the Gusset Patents.⁷ Only once is it used without further elaboration: dependent Claim 4 of the '883 Patent claims "A pillow as recited in claim 1, wherein said gusset is formed of an open cell construction." ('883 Patent Claim 4.) In the other eight uses of the term "open cell construction," it is used as part of a longer phrase describing the type of open cell construction to be used in greater detail.

⁷ Claims 1 and 11 of the '134 Patent, claims 13, 22, 33, and 34 of the '332 Patent, and claims 4, 14, and 18 of the '883 Patent. (See Joint Disputed Claim Terms Chart at 1-4.)

For Claim 4 of the '883 Patent, the parties agree that "open cell construction" should be construed using the inventor's definition – that is, "a construction having overall porosity greater than the inherent porosity of the constituent materials or inherently having high porosity." ('883 Patent 1:43.)

For the eight remaining claims that involve a gusset of open cell construction, the parties disagree about the proper approach to construction. The claim terms at issue begin with the words "said open cell construction is formed by . . ." or "said open cell construction being formed by . . ." and proceed to describe a specific structure (e.g., "spaced apart strands).

The parties' disagreement relates to the manner in which the inventor's definition of "open cell construction" should be used in the construction of these eight claims.

1. Bedgear's Position

Bedgear argues, based on the claim language and the prosecution history, that the inventor's definition is a definition in the alternative, providing for two possible types of "open cell" constructions. Bedgear contends that the Gusset Patents describe three open cell embodiments, two of which correspond to the first type of open cell construction ("overall porosity greater than the inherent porosity of the constituent material") and one of which corresponds to the second type of

open cell construction ("inherently having high porosity").

(Parachuru Dec. ¶¶ 59, 72.) It argues that each of the claim terms incorporating "open cell construction" is directed to one of the two alternative categories of "open cell construction", and that "open cell construction" should therefore be defined in the context of each specific claim term, with each term defined as directed to one or the other alternate categories. (See Joint Disputed Claim Terms Chart at 1-4.) In summary, Bedgear argues that:

- In the first embodiment (what Bedgear refers to as the "Arranging Strands Embodiment"), strands of material are arranged such that the "overall porosity [of the construction is] greater than the inherent porosity of the constituent materials" used to make the strands. This embodiment corresponds to the structures recited in Claim 1 of the '134 Patent, Claims 22, 33 and 34 of the '332 Patent, and Claim 18 of the '883 Patent, in which strands of material have been "interlaced," "spaced-apart", or arranged in a "mesh configuration" such that the pores between the strands are bigger than pores in the material used to make the strands. ('332 Patent, 2:21-26.)
- The second embodiment (which Bedgear calls the "Creating Apertures Embodiment") refers to structures in which

apertures are "defined" in a base material such that the "overall porosity [of the construction is] greater than the inherent porosity" of the base material. Bedgear argues that Claim 11 of the '134 Patent is directed to the second embodiment: a "construction [] formed by apertures defined in [] base material, said apertures being larger than any pores inherently defined in said base material." According to the specification, the apertures may be created by, e.g., cutting or removing material. ('134 Patent at 2:37-40.)

- The third embodiment (which Bedgear calls the "Using High Porosity Embodiment") refers to open cell constructions using base materials that are "inherently significantly porous." ('332 Patent, 2:20-52, 2: 65-67, Figs. 3-5.) Bedgear argues that Claim 13 of the '332 Patent and Claim 14 of the '883 patent, where the "porosity of [the] base material" of the gusset may be "substantially greater" porosity than the material forming the first (top) and second (bottom) panel of the pillow, are directed to this embodiment.

2. Glideaway's Position

Glideaway's argument is twofold. First, Glideaway argues that the only term that requires construction is "open cell construction", and that each claim term incorporating the

term "open cell construction" should be construed using the inventor's definition of that term. (Glideaway Resp. Br. at 22 ("The claims require both "an open cell construction," as expressly defined by the inventor's controlling lexicography, as well as the additional claimed features of "said open cell construction," such as "interlaced strands" or "spaced apart strands.")).) Second, it argues that the portion of the definition relating to materials "inherently having high porosity" is indefinite. (*Id.*) It contends based on these two points that all claim terms incorporating "open cell construction" are indefinite. (*Id.*)

3. Analysis: Construction

Based on the foregoing, the court adopts Bedgear's proposed constructions, and rejects Glideaway's argument that the entirety of the inventor's definition must be incorporated into each phrase using the term "open cell construction."

Glideaway is correct, of course, that "the inventor's lexicography governs," *Phillips*, 415 F.3d at 1316. The claims, the specifications, and the prosecution history, make clear that the inventor's definition of "open cell construction" was intended to describe two alternative categories, and that the eight claim terms using "open cell construction" in conjunction with specific structures directed at specific embodiments were each intended to satisfy one of the two alternative categories.

There is therefore ample evidence supporting Bedgear's constructions.

First, the language of the definition is clearly written in the disjunctive: the inventor used the word "or" to separate alternative categories. The Federal Circuit has explained that "[t]he disjunctive 'or' plainly designates that a series describes alternatives" and has "recognized that that the use of two terms as alternatives functions as a redefinition of a term if that redefinition is so clear that it equates to an explicit one." *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1200 (Fed. Cir. 2013) (internal quotation marks and citations omitted). Because Bedgear's definition was a definition providing for two alternative categories, it would not make sense to use the entire definition for claim terms that are clearly directed to one or the other category.

Second, the claims themselves can be clearly categorized by whether they are directed to embodiments in which the overall porosity of the construction is "greater than the inherent porosity of the constituent materials", or to whether they are directed to embodiments using material "inherently having high porosity." (See chart above.) It is well-settled that "[a] patentee may draft different claims to cover different embodiments." *Intamin Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1337 (Fed. Cir. 2007). Bedgear has done that here.

Third, the specifications of all three Gusset Patents clearly describe "various constructions" and "variations" corresponding to the two categories of the inventor's definition. Patent '134 is representative: it states that the gusset (i) "may be defined by a plurality of interlaced or spaced-apart strands . . . arranged so that open cells are defined therebetween"; (ii) "may be formed of a base material" in which apertures are "formed during the manufacture" or afterwards, "such as by cutting" or removing material; or (iii) "as further variation", may be formed with the base material being inherently significantly porous." ('134 Patent at 2:16-45.) The descriptions of these "various constructions," and the use of the phrase "further variation", clearly indicate that the inventor contemplated multiple types of structures which would embody one or the other of the alternative definitions of "open cell construction." ⁸

Fourth, certain of the specific structures recited in the eight terms at issue were added during prosecution to address the examiner's concerns. The examiner had rejected

⁸ Glideaway notes that the Gusset Patent specification states that "the gusset may include one or more of the configurations described above", but this statement does not contradict the idea that the configurations each satisfy alternative prongs of the inventor's definition. (See Glideaway Resp. Br. at 21.) As an example, a construction could have material arranged in a mesh configuration, where that material is "inherently significantly porous." This construction would not defeat the idea that a construction is also of "open cell construction" where it has *only* one of those two attributes.

Bedgear's use of "open cell construction" because "the . . . preferred definition of this term has not been read directly into the claims since the structural features that are used to define this term are not present in the claim." (Bedgear Op. Br., Ex. G, USPTO Office Action Summary, ECF No. 74-9, at 5.) Bedgear added various structures so that the references to "open cell construction" were directed to specific embodiments of the preferred definition (see Ex. J, Response to Office Action, ECF No. 74-11, at 2-4), and the claims were allowed. This prosecution history is further intrinsic evidence that Bedgear's claim terms were each drafted in reference to specific embodiments of "open cell construction."

Based on the above analysis, the court adopts Bedgear's proposed constructions as correct, because they are amply supported by the intrinsic evidence and "stay[] true to the claim language and most naturally align[] with the patent's description of the invention." *Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1366 (Fed. Cir. 2016)

4. Analysis: Indefiniteness

Glideaway's arguments concerning construction of the "open cell construction" terms centers around its contention that the terms are indefinite within the meaning of Section 112 ¶ 2. Glideaway argues that defining "open cell construction" as

a construction “inherently having high porosity” is indefinite, because the Gusset Patents lack an “objective standard . . . for a person of ordinary skill to determine what qualifies as ‘high porosity’ with reasonable certainty.” (Glideaway Resp. Br. at 20.) As a general matter, Glideaway’s position has some support. Although not “inherently indefinite,” “[t]erms of degree are problematic if their baseline is unclear to those of ordinary skill in the art [and] . . . will fail for indefiniteness unless they provide for objective boundaries for those of skill in the art when read in light of the specifications and the prosecution history.” *Liberty Ammunition, Inc. v. United States*, 835 F.3d 1388, 1395–96 (Fed. Cir. 2016), *cert. denied*, 137 S. Ct. 1825 (2017) (finding that the claim term “reduced area of contact” for a projectile was not indefinite because the specification specified that it was “reduced . . . as compared to conventional projectiles”, and the Background of the Invention identified a specific bullet type as a “conventional . . . projectile”).

Bedgear argues that “the question of indefiniteness goes to the validity of a patent,” which is more properly addressed at summary judgment, and asks the court to strike Glideaway’s indefiniteness argument. (Bedgear Reply Brief, ECF No. 79, at 10.) The court, reserves ruling on the issue of indefiniteness. The Federal Circuit has advised that “[c]ourts

should be cautious not to allow claim construction to morph into a mini-trial on validity.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1374 (Fed. Cir. 2014). Although “indefiniteness has the same construction underpinnings as a *Markman* hearing, two reasons make it more appropriate to defer it until summary judgment: (1) the high burden of proof required to show indefiniteness and (2) its potentially dispositive, patent-invalidating nature.” *Int’l Dev. LLC v. Richmond*, No. 09-CV-2495, 2010 WL 4703779, at *6 (D.N.J. Nov. 12, 2010). Courts often decline to consider issues of indefiniteness at the claim construction stage. See e.g. *TransWeb, LLC v. 3M Innovative Properties Co.*, No. 10-CV-4413, 2011 WL 5825782, at *3 (D.N.J. Nov. 16, 2011) (citing cases and declining to consider indefiniteness during claim construction); but see *Function Media, L.L.C. v. Google, Inc.*, No. 207-CV-279, 2009 WL 3260566, at *6 (E.D. Tex. Oct. 9, 2009) (determining, during claim construction, that a means-plus-function claim was indefinite for lack of structure); *Semcon IP Inc. v. Huawei Device USA Inc.*, No. 16-CV-00437, 2017 WL 2972193, at *25 (E.D. Tex. July 12, 2017) (concluding that “relatively short messages” is indefinite); *Arctic Cat Inc. v. Bombardier Recreational Prod. Inc.*, No. 12-CV-2692, 2016 WL 6832623, at *17 (D. Minn. Nov. 18, 2016) (concluding that “normal” and “low temperature” are indefinite). Indeed, certain cases cited by Glideaway in

support of its request to declare "open cell construction" indefinite are orders on summary judgment, or appeals from such orders. See *Halliburton Energy Svs. Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008); *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008) (reviewing determination of indefiniteness on appeal from summary judgment and reversing and remanding to district court); *Advanced Display Techs. of Texas, LLC v. AU Optronics Corp.*, No. 6:11-CV-011, 2012 WL 2872121, at *1 (E.D. Tex. July 12, 2012).

For all claims other than Claim 4 of the '883 Patent, Bedgear's proposed construction does "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus*, 134 S. Ct. 2120 at 2129-30. For example, based on Bedgear's proposed construction, a person of ordinary skill would know that the gusset claimed in Claim 13 of the '332 Patent has an "open cell construction" because it is "made up of a constituent material that, by itself, has substantially higher porosity than the material of the first and second panels." This description informs a person of ordinary skill in the art about what qualifies as "high porosity," because the claim itself provides a definition of that part of the term.

Claim 4 of the '883 Patent is the only claim where the phrase "inherently having high porosity" is arguably incorporated into the claim construction without any context or

baseline for "high porosity." Bedgear argues that "inherently having high porosity" means "a base material with a porosity that is substantially greater than the porosity of material forming the first and/or second panels." (Bedgear Reply Br. at 10.) This explanation, however, fails to fully resolve the question of construction with regard to Claim 4 because it would render Claim 4 redundant with Claim 14 of the same patent, which specifically incorporates this type of open cell construction into the claim description. See *Versa Corp v. Ag-Bag Inter. Ltd*, 392 F.3d 1325, 1330 ("[t]he doctrine of claim differentiation 'create[s] a presumption that each claim in a patent has a different scope' and that '[t]he difference in meaning and scope between claims is presumed to be significant to the extent that the absence of such difference in meaning and scope would make a claim superfluous'") (citations omitted).

Nevertheless, the court will reserve ruling on this issue of indefiniteness, as it can be more aptly decided by the court at summary judgment when Bedgear would have the opportunity to provide expert evidence that a person skilled in the art would reasonably have been informed as to the meaning of "inherently having high porosity" in context.

iii. "Substantially Greater"

The claim term "substantially greater" is used in the '134 Patent in Claim 17, the '332 Patent in Claim 13, and the

'883 Patent in Claim 14.⁹ In each of these claims, the claimed gusset is described as being formed of material of "substantially greater" porosity than the material forming the first (i.e., top) and second (i.e. bottom) panels of the pillow. The parties agree that the inventor defined the term and each patent specification states that "[s]ubstantially greater" refers to being at least greater than, but preferably being at least twice greater than." ('134 Patent at 2:54; '332 Patent at 2:58; '883 Patent at 2:61.) Bedgear's proposed construction adopts this definition in its entirety. Glideaway argues that the term should be construed as "at least greater than", because "preferably being at least twice greater than . . ." expresses a preference, and it is "impossible to assess whether such a preference is met." (Glideaway Resp. Br. at 23.) Glideaway does not cite any cases barring the use of a term of preference in a claim construction, however, Bedgear provides authority supporting its position. See *Pozen Inc. v. Par Pharm., Inc.*, 719 F. Supp. 2d 718, 728 (E.D. Tex. 2010) (construing "long-acting, nonsteroidal, anti-inflammatory drug (LA-NSAID)" as "an NSAID with a pharmacokinetic half-life of at least about 4-6 hours and preferably about 8-14 hours . . .", based on the inventor's definition and over the defendant's objections to

⁹ The court notes that the parties do not list '134 Patent Claim 17 as including "substantially greater" on their claim chart.

using a term of preference in the construction); *Loftex USA LLC v. Trident Ltd.*, 957 F. Supp. 2d 375, 380–81 (S.D.N.Y. 2013) (Construing “Fine count yarn” as “yarns greater than or equal to about 60s (preferably, 60s) count yarns” based on inventor’s definitions). As these courts have concluded, including a term of preference or a preferred embodiment in a claim construction does not impermissibly limit the construction to the preferred embodiment; it simply states what a person of ordinary skill would understand the term to mean, based on the explicit definition in the specification. Furthermore, limiting the construction to “at least greater than,” as Glideaway proposes, fails to give any meaning to the claim term “substantially”: any material that has “at least greater” porosity than other material could also simply be described as having a “greater porosity” than the other material. *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (explaining that “[a] claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so” and concluding that a construction that rendered the phrase “about 35 mg” to mean “35 mg” impermissibly rendered the term “about” superfluous).

Bedgear’s proposed construction – the inventor’s own definition – provides some context for the term “substantially” by explaining that it means “preferably . . . at least twice

greater than.” (Bedgear Reply Br. at 31.) As such, the court finds that the Bedgear’s construction of “substantially greater” is the proper construction of the term.

iv. “Perimetrically Bounds” And “Perimetrically Bounding”

Bedgear proposes that the court construe the terms “perimetrically bounds” and “perimetrically bounding” to have their “plain and ordinary meaning,” or, in the alternative, to construe the terms as “shares the perimeters of” (or “sharing the perimeters of”, respectively), which it argues is the plain and ordinary meaning of the disputed term. (See Joint Disputed Claim Terms Chart at 5.) Glideaway proposes a construction of “forms [or forming] the perimeter of.” Bedgear contends that Glideaway’s proposed construction impermissibly imposes a functional limitation on the gusset that is not present in, and conflicts with, the specifications. Specifically, it argues that the perimeter of a panel is ‘defined’ by its edge . . . in other words, an object’s perimeter exists naturally by virtue of its own boundary,” and that the panels’ perimeters are therefore not “form[ed]” by the gusset. (Bedgear Op. Br. at 30-31.)

The court adopts Bedgear’s proposed construction. The first or second panels of a pillow – essentially, pieces of fabric – have their own perimeters, defined by their edges. Were the panels to be removed from the pillow, their perimeter

would not change. The gusset therefore cannot be said to "form" the perimeter of the panels in any way; it merely "shares" those perimeters, as Bedgear contends.

v. "Configured to Have Air Enter The Cavity . . ."

Claim 16 of the '332 Patent and Claim 1 of the '883 Patent recite that "said pillow is configured to have air enter the cavity through pores in the first and second panels and have the air exit the cavity through pores in the gusset." Bedgear proposes a construction that only slightly modifies the wording of the actual claim: "The said pillow is designed to have air which enters the pillow through the first or second panels then exit the pillow through the gusset." Bedgear contends that this proposed construction is supported by the claim and specification and makes clear that the claimed invention permits at least some of the *same* air that enters the cavity of the pillow to exit through the gusset. (Bedgear Op. Br. at 28.)

Glideaway's proposed construction is that the pillow is "[c]onfigured to allow air to enter the cavity through pores in the first and second panels and exit the cavity through pores in the gusset, and that this limitation does not exclude some air also being allowed to exit the cavity through pores in the first and second panels and some air also being allowed to enter the cavity through pores in the gusset."

Bedgear contends that Glideaway's proposed construction omits the concept that at least some of the air that exits through the gusset is the same air that entered through the first or second panel. (Bedgear Op. Br. at 29-30.) In addition, Bedgear argues that the portions of Glideaway's proposed construction concerning "some air" exiting through the first and second panels and "some air also being allowed to enter the cavity through pores in the gusset" are not based either on the specification or the claim. Bedgear emphasizes that Glideaway's use of the word "allow" (*i.e.* "configured to allow . . .") "renders this critical claim limitation entirely meaningless" and "would encompass all gusseted pillows." (*Id.*)

Bedgear's proposed construction is faithful to the claim language and reflects the purpose of the limitation, which is to enable an airflow channel that will create a cooling effect by permitting hot air from the pillow surface to escape through the pores in the gusset. Glideaway's proposed construction removes the limiting nature of the claim language, such that any gusseted pillow in which air is "allowed" to enter through a panel and escape through a gusset would be encompassed by the claim. Furthermore, although it may be correct that even under Bedgear's proposed construction some air might enter through the gusset or might escape through a panel, these

"negative limitations" are not required by, or based in, the language of the specification.

The court therefore construes "said pillow is configured to have air enter the cavity through pores in the first and second panels and have the air exit the cavity through pores in the gusset" in accordance with its usage in Claim 16 of the '332 Patent and Claim 1 of the '883, with the following modification proposed by Bedgear: "The pillow is designed to have air which enters the pillow through the first or second panels then exit the pillow through the gusset." (Bedgear Opening Br. at 28.)

B. Claims in the '408 Patent

i. "Pillow Cover" And "A Pillow Disposed in The Cavity"

Bedgear has asserted Claim 12 of the '408 Patent against Glideaway. This claim is for a "bedding system," comprising, *inter alia*, a "pillow cover" with "a pillow disposed in the cavity" of the pillow cover. ('408 Patent Claim 12.)

As the parties' proposals demonstrate, the real dispute is over the construction of the term "pillow." Bedgear proposes that the court construe "pillow" as "a cover containing fill material", whereas Glideaway contends that no construction is necessary, or that "pillow" be construed to mean "a cushion for providing support while resting or sleeping."

Bedgear argues that the pillow referenced in the claim is what it calls a "standard pillow that includes fill material(s) stuffed inside a fabric cover." (Bedgear Op. Br. at 27.) Although Bedgear may be correct that a "standard" pillow is comprised of both a fabric cover and "fill material," it is not persuasive that a person of ordinary skill in the art would understand that the claimed pillow cover to be used or limited to only "standard" pillows. First, as Glideaway points out, the '408 Patent states that "[i]n some embodiments pillow 24 includes a cover 54 having a first panel," suggesting that alternative embodiments, not including a cover, are contemplated. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) ("although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments"). Second, despite Bedgear's contention that "[w]ithout any cover to hold the fill material together, a pillow would simply come apart and cease to be anything more than loose fill material" (Bedgear Reply Br. at 14), it is very easy to imagine a pillow that has no cover at all - for example, a block of memory foam or an inflatable pillow that can, but need not, be placed into a fabric cover. (See, e.g., '134 Patent at 3:46-47 (noting one embodiment of a pillow could include solid layers of foam).) Even one of the extrinsic sources cited by Bedgear in support of

its position, the Illustrated Oxford Dictionary, includes "any pillow-shaped block or support" as the definition of "pillow." (Bedgear Op. Br., Ex. K, ECF No. 74-12, at 4). Webster's Third International Dictionary defines "pillow" as "something used to support the head of a person resting or sleeping; *esp*: a sack or bag made typically of cloth and filled with a soft or resilient material" – supporting the position that although a pillow *may* be a fabric cover stuffed with a soft fill, that is not the only definition. Ultimately, Bedgear seeks to restrict the type of "pillow" described in the patent to what it now calls a "standard" pillow. But there is no definition of, or reference to, a "standard" pillow in the patent, and the intrinsic evidence suggests that a pillow comprising a fabric cover stuffed with loose fill is only one possible embodiment.

For these reasons, the court declines to construe "pillow cover" or "pillow disposed in the cavity."

Conclusion

For the reasons stated herein, the court construes the disputed claim terms as stated below. (1) The court construes "gusset" to mean "a piece or pieces of material between and separating the first and second panels, such that the first and second panels are each joined to the gusset but are not joined to each other." (2) The court adopts Bedgear's proposed constructions of "open cell construction" in the Joint Disputed

Claim Terms Chart. (See ECF No. 72-1 at 1-4.) (3) The court adopts Bedgear's proposed construction of "substantially greater" as the proper meaning of the term. "Substantially greater" means "being at least greater than, but preferably being at least twice greater than." (*Id.* at 6.) (4) The court adopts Bedgear's construction of the terms "perimetrically bounds" and "perimetrically bounding." "Perimetrically bounds" and "perimetrically bounding" mean, respectively, "shares the perimeters of" and "sharing the perimeters of." (5) The court adopts Bedgear's proposed construction of "said pillow is configured to have air enter the cavity through pores in the first and second panels and have the air exit the cavity through pores in the gusset": "The pillow is designed to have air which enters the pillow through the first or second panels then exit the pillow through the gusset." (*Id.* at 6.)

(6) The court declines to construe "pillow cover" or "pillow disposed in the cavity." The parties are to confer and advise the court via ECF no later than March 11, 2019 how they intend to proceed.

SO ORDERED.

Dated: Brooklyn, New York

February 25, 2019

/s/

KIYO A. MATSUMOTO
United States District Judge
Eastern District of New York